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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,128	11/21/2001	James Y.J. Chung	Mo6824/MD-00-98-KU	2121

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EXAMINER

WYROZEBSKI LEE, KATARZYNA I

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 09/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/990,128	CHUNG ET AL.	
	Examiner	Art Unit	
	Katarzyna Wyrozebski Lee	1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>1101</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to the hydrotalcite formula of claim 4, when balancing the charges in the chemical equation given, these charges do not add up. The applicants are requested to provide for either proper explanation or proper hydrotalcite formula. Any amendment has to have support in the specification.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by URABE (JP 05-239330) in view of evidence in (US 4,611,024).

The prior art of URABE discloses molding composition comprising polycarbonate and hydrotalcite in an amount of 0.001-3 pbw (see Abstract).

According to the specification of URABE, the hydrotalcite has particle size of 0.1-5 microns [0018] and a formula of $Mg_{(1-x)}Al_x(OH)_2CO_{3(x/2)}mH_2O$ where $x = 0.1-0.4$ and $m = 0-1$. Hydrotalcite utilized by the prior art of URABE are DHT hydrotalcites tradename. DHT-4A hydrotalcites have formula $Mg_{(4-5)}Al_2(OH)_{13}CO_3 \cdot 3.5H_2O$. Magnesium atoms (4-5), the number of OH will change to either 12 or 13 in order to chemically balance the equation.

In the light of the above disclosure the prior art of URABE anticipates the requirements of claims rejected above.

5. Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by NAKADA (JP 07-062215) in view of evidence in (US 4,611,024).

The prior art of NAKADA discloses molding composition comprising polycarbonate and hydrotalcite (see Abstract).

The hydrotalcite of the prior art of NAKADA is utilized in amount of 0.001-2 pbw. According to further specification, the particle size of the hydrotalcite is in a range of 0.1-5 micrometers [0024] and has formula of $Mg_{(1-x)}Al_x(OH)_2CO_{3(x/2)}mH_2O$ where $x = 0.1-0.4$ and $m = 0-1$. Hydrotalcite utilized by the prior art of NAKADA are DHT hydrotalcites tradename. DHT-4A hydrotalcites have formula $Mg_{(4-5)}Al_2(OH)_{13}CO_3 \cdot 3.5H_2O$. Since there are 4-5

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Magnesium atoms, the number of OH will change to either 12 or 13 in order to chemically balance the equation.

In the light of the above disclosure, the prior art of NAKADA anticipates requirements of claims rejected above.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

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the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1, 2, 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over NOSU (US 6,313,208).

The prior art of NOSU discloses composition comprising thermoplastic polymer and hydrotalcite (ABSTRACT).

According to claim 1 of NOSU, hydrotalcite is utilized in amount of 0.01-10 pbw of thermoplastic resin and has particle size of 2 microns or less. Preferably particle size is 0.4-1 microns (claim 3). The hydrotalcite of NOSU contains very little iron impurities, less than 0.02 %by weight of hydrotalcite, which limitation is also open to no impurity at all (no lower limit).

Specification of NOSU discloses, that the hydrotalcite can be molded with thermoplastic resins. Col. 7, line 3 of NOSU discloses polycarbonate.

Use of hydrotalcites in the thermoplastic resin composition used for molding results in composition having good heat resistance.

In the light of the above disclosure, it would have been obvious to one having ordinary skill in the art to utilize the composition of the prior art of NOSU and thereby arrive at the present invention. Prior art of NOSU teaches hydrotalcites with thermoplastic resin, wherein the resin taught or suggested by the prior art of NOSU is polycarbonate.

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10. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over NOSU (US 6,313,208 as applied to claims 1, 2, 5-7 above, and further in view of either NAKADA (JP 07-062215) or URABE (JP 05-239330).

The discussion of the disclosure of the prior art of NOSU from paragraph 9 of this office action is incorporated here by reference.

The difference between the present invention and the disclosure of the prior art of NOSU is showing of hydrotalcites such as DHT hydrotalcites.

The discussion of the disclosure of the prior art of either NAKADA or URABE from paragraphs 4 and 5 of this office action is incorporated here by reference.

DHT type hydrotalcites are utilized in making electronic parts, which requires the composition to have good heat resistance.

In the light of the above disclosure it would have been obvious to one having ordinary skill in the art at the time of the instant invention to utilize the hydrotalcites of either NAKADA or URABE in composition of NOSU and thereby arrive at the present invention. USE of DHT hydrotalcites would still provide composition having good heat resistance.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katarzyna Wyrozebski Lee whose telephone number is (703) 306-5875. The examiner can normally be reached on Mon-Thurs 6:30 AM-4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (703) 306-2777. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Katarzyna Wyporebski
KIWL
September 2, 2003